

## A B S T R A C T

The turbomolecular vacuum pump with active magnetic bearings comprises an enclosure (110) defining a primary vacuum chamber (116), a rotor (120), an electric motor (107), an axial magnetic bearing (103), radial magnetic bearings (101, 102), an axial detector (106), and radial detectors (104, 105). Remote external electric circuits associated with the electric motor (107) and with the axial and radial magnetic bearings (103 and 101, 102) essentially comprise power supply electric circuits (191). Circuits (194) for controlling the axial and radial magnetic bearings (103 and 101, 102) from signals issued by the axial and radial detectors (106 and 104, 105) are embedded in a resin and placed inside the enclosure (110) in the primary vacuum chamber (116). A hermetic leaktight electrical connector (180) and an electric cable (183, 184) providing a connection with the remote external electric circuits (191, 192) each have a number of connection wires that is less than ten.

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